

Herschel's Nos.	R.A. 1900. h m s	Decl. 1900. ° ' "	Herschel's descriptions in the Phil. Trans. 1811.	Dates when photographs were taken.	Isaac Roberts's descriptions of his photographs.
49	21 46 52	21 31	Affected.	1899 Aug. 9	Sky clear; stars small and crowded; areas void of stars; no nebulosity.
50	22 57 24	25 45	Much affected.	1898 Sept. 20	{ Sky clear; stars very numerous; areas void of stars; no nebulosity.
51	22 57 54	25 45	Affected.		
52	23 0 17	29 17	A little affected.	1900 Oct. 27	Sky clear; stars small and very numerous; areas void of stars; JH II. 212 on plate; no diffused nebulosity.

### Conclusions.

The final results of the correlation of Herschel's fifty-two nebulous regions and my photographs can be given in a few words, as follows :

Of the fifty-two nebulous regions described by Herschel, the photographs show diffused nebulosity on four of them only ; there is no visible trace of diffused nebulosity on forty-eight of the areas, but on the remaining four, which are Nos. 7, 25, 44, and 46 respectively in the table, there is nebulosity with remarkable characteristic features, and these are delineated upon three of the photographs, regions Nos. 44 and 46 being on one plate.

Two photographs have been enlarged as paper prints, and are reproduced on Plates 1 and 2, an examination of which will convey a more accurate knowledge of the objects than is possible by any descriptive matter.

### *Note on Photographs of Comet b 1902 (Perrine), taken at the Royal Observatory, Greenwich.*

*(Communicated by the Astronomer Royal.)*

Photographs of Comet *b* 1902 (Perrine) were obtained on twenty-seven nights, between September 6 and October 29. With the exception of one or two photographs at the beginning, the 30-inch reflector was used. Twenty-nine of the photographs of short exposure showing a well-defined nucleus have been selected for measurement for the position of the comet, and the results deduced from them will be communicated to the Society later. The exposures with the 30-inch reflector ranged from 5<sup>m</sup> to ½<sup>m</sup>, according to the brightness of the comet. Besides these, seven photographs with long exposures, ranging from 13<sup>m</sup> to 70<sup>m</sup>, were also taken, those obtained on September 26 and September 29 (the latter reproduced on Plate 3) being of special interest. On these days the exposures were 53<sup>m</sup> and 62<sup>m</sup>

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respectively, and "Lightning" plates were used. The telescope was guided in R.A. and Dec. so as to allow for the motion of the comet, and the stars are consequently shown as trails representing the comet's motion during the exposure. On each of these photographs there is a bright globular head, several short tails and one long faint tail extending a degree from the comet. On the photograph taken on September 29 as many as seven tails of different lengths, divided by six narrow rifts, can be distinguished. The direction of the long tail on both photographs is in approximately the opposite direction to the projection of the Sun on the plate.

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*Stereoscopic Pictures of Comet Perrine.* By Max Wolf, Ph.D.

The two photographs presented have been made from four plates which I took with my 16-inch double photographic telescope. The two 16-inch lenses are so nearly alike in size and focal length that the idea occurred to me to obtain a stereoscopic effect by exposing plates at slightly different times with the two lenses, so that the movement of the Earth and of the comet should give the necessary shift, and I might hope to obtain the right effect by combining two plates. At first I hoped to be able to use for this purpose two successive plates made with the same telescope; but this gave no satisfactory results: the movement of the comet was too quick.

Indeed the first of the two stereos (566 and 567) gives an almost surprising view in a stereoscope. The comet hangs free in space, very near to the observer, and the trails of the fixed stars lie far behind. Seen with the naked eye the nebulous mass of the comet on the photo is flat and opaque; in the stereoscope it looks like a cloud of dust, condensed towards its centre. The trails of the fixed stars visible through it are seen far behind, giving out their own light through the tail.

The dates of these two pictures are:

No. 566: 1902 Sept. 25, M.T. Königstuhl  $7^h 45^m.5 - 8^h 45^m.5$

No. 567: " " " " "  $7^h 55^m.0 - 8^h 55^m.0$

and the second stereo:

No. 576: 1902 Oct. 1, M.T. Königstuhl  $7^h 48^m.1 - 8^h 48^m.1$

No. 577: " " " " "  $8^h 3^m.1 - 9^h 3^m.1$

Here the movement of the comet was still a little too great, so that the stereoscopic effect is not as clearly visible for every observer as on the first pair: it requires to be looked at from a great distance. Still, on this picture the tail of the comet

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